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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,805	04/02/2004	Craig C. Andrews	LYNN/0157	9983

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STREETS & STEELE
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HOUSTON, TX 77040

EXAMINER

HOPKINS, ROBERT A

ART UNIT PAPER NUMBER

1724

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,805

Applicant(s)

ANDREWS, CRAIG C.

Examiner

Robert A. Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 18-38 is/are rejected.
- 7) ☒ Claim(s) 11-17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7-6-04, 6-29-05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 20-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 lines 3-4 recites "the one or more ultraviolet transmission surfaces". There is a lack of antecedent basis for "the one or more ultraviolet transmission surfaces" in previous claim limitations. Claims 21-38 depend on claim 20 and hence are also rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berge et al(6506428) taken together with Caracciolo(4827727).

Berge et al teaches an ice machine comprising a makeup water conduit(57) , a circulating water conduit(62) comprising an ozone injection port(66), wherein water is circulated by a circulating pump(64) from a water reservoir(48) to evaporator plates, an ozone generator(58) in fluid communication with the ozone injection port, and a controller(column 8 lines 36-44), wherein the controller starts and stops the ozone generator. Berge et al is silent as to the makeup water conduit comprising one or more

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ultraviolet transmission surfaces and one or more ozone injection ports, and the circulating water conduit comprising one or more ultraviolet transmission surfaces. Caracciolo teaches a chiller including a water circulation and sterilization closed circuit, wherein an ozone generator(3) supplies ozone to ozone injection points(4) throughout the water circulation and sterilization closed circuit and also a water conduit includes a UV transmission surface for a UV tube(17). It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide an ozone injection port to the makeup water conduit(57) of Berge et al to distribute ozone to piping at both the makeup water conduit and circulating water conduit for increased ozone sterilization of the water in the system. Also, it would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a makeup water conduit and circulating water conduit of Berge et al with a UV transmission surface to provide for further purification of the water in the system of Berge et al. Examiner notes that although Caracciolo teaches a single UV transmission surface, the provision of multiple UV transmission surfaces would be an obvious modification to the system of Berge et al for locations along a water circulation conduit and also at the makeup water conduit.

Caracciolo further teaches wherein an ozone generator is in fluid communication with multiple ozone injection ports. Berge et al further teaches the controller communicates electrical signals from a refrigeration compressor or condenser fan.

Claims 20-28 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berge et al(6506428) taken together with Caracciolo(4827727).

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Berge et al teaches a method for decontaminating water in an ice making machine comprising injecting ozone into water within a circulating water conduit, and controlling ozone production with a controller, wherein an ozone generator is not continuously producing ozone. Berge et al is silent as to exposing water in a region of a makeup conduit to UV radiation and exposing water in a region of a circulating water conduit to UV radiation through one or more UV transmission surfaces. Caracciolo teaches a chiller including a water circulation and sterilization closed circuit, wherein an ozone generator(3) supplies ozone to ozone injection points(4) throughout the water circulation and sterilization closed circuit and also a water conduit includes a UV transmission surface for a UV tube(17). It would have been obvious to someone of ordinary skill in the art at the time of the invention to provide a step of exposing water in a region of a makeup conduit to UV radiation and exposing water in a region of a circulating water conduit to UV radiation through one or more UV transmission surfaces to provide for further purification of the water in the system of Berge et al. Examiner notes that although Caracciolo teaches a single UV transmission surface, the provision of multiple UV transmission surfaces would be an obvious modification to the system of Berge et al for locations along a water circulation conduit and also at the makeup water conduit.

Caracciolo further teaches wherein an ozone generator is in fluid communication with multiple ozone injection ports

Allowable Subject Matter

Claims 11-17, and 29-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11 and 29 recite "wherein the ozone generator comprises an electrolyzer". Berge et al teaches an ozone generator which functions by electrostatic discharge, converting ordinary oxygen in an airflow to ozone. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to substitute an ozone generator which comprises an electrolyzer for the ozone generator of Berge et al because Berge et al does not suggest such a modification. Claims 12-17 depend on claim 11 and hence would also be allowable upon incorporation of claim 11 into claim 1. Claims 30-37 depend on claim 29 and hence would also be allowable upon incorporation of claims 29 and 28 into claim 20.

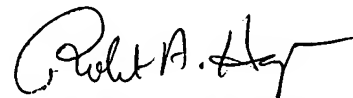
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A. Hopkins whose telephone number is 571-272-1159. The examiner can normally be reached on Monday-Friday, 7am-4pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rah
October 17, 2005


ROBERT A. HOPKINS
PRIMARY EXAMINER
AU.1724